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MEAN WELL

SWITCHING POWER SUPPLY

ISO-9001 CERTIFIED MANUFACTURER

SP-500 SERIES

Jameco Part Number 147053 (SP-500-24)

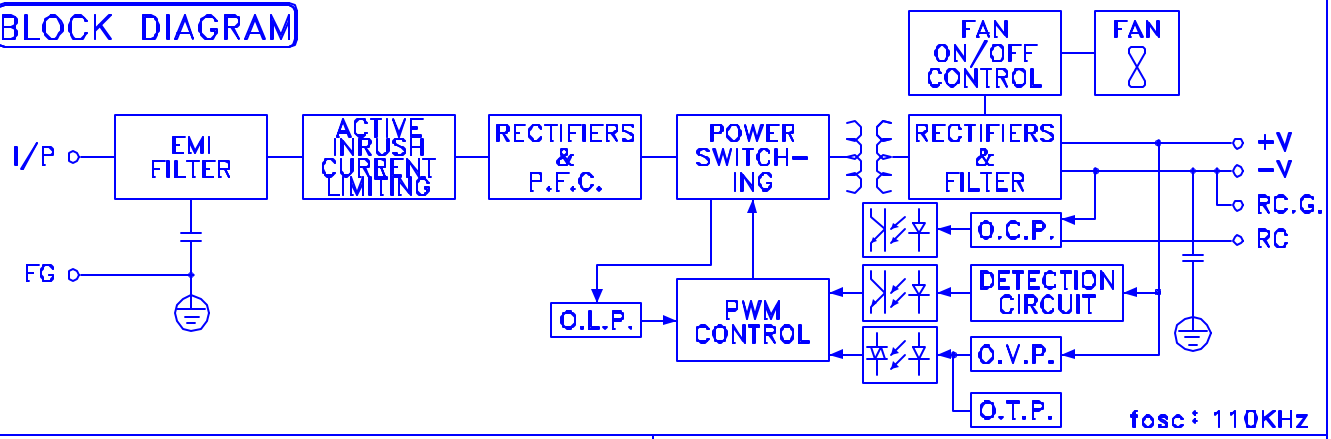
- .LOW COST, HIGH RELIABILITY
- .COMPACT SIZE, LIGHT WEIGHT
- .COOLING FAN ON/OFF AUTOMATICALLY
- .100% FULL LOAD BURN-IN TEST
- .BUILT IN REMOTE CONTRAL
- .105◦C OUTPUT CAPACITOR
- .INTERNATIONAL AC INPUT RANGE
- .BUILT IN EMI FILTER, LOW RIPPLE NOISE
- .HIGH EFFICIENCY, LOW WORKING TEMPERATURE
- .BUILT IN PFC CIRCUIT
- .SOFT-START CIRCUIT, LIMITING AC SURGE CURRENT
- .SHORT CIRCUIT, OVERLOAD, OVER VOLTAGE, OVER TEMP. PROTECTED

MODEL / SPECIFICATION	SP-500-12	SP-500-13.5	SP-500-15	SP-500-24	SP-500-27	SP-500-48
DC OUTPUT VOLTAGE	12V	13.5V	15V	24V	27V	48V
OUTPUT V. TOLERANCE	±1%	±1%	±1%	±1%	±1%	±1%
OUTPUT RATED CURRENT	40A	36A	32A	20A	18A	10A
OUTPUT CURRENT RANGE	0-40A	0-36A	0-32A	0-20A	0-18A	0-10A
RIPPLE & NOISE	240mVp-p	240mVp-p	240mVp-p	240mVp-p	200mVp-p	300mVp-p
LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
DC OUTPUT POWER	480W	486W	480W	480W	486W	480W
EFFICIENCY	84%	84%	83%	85.5%	86.5%	87%
DC VOLTAGE ADJ.	10-13.2V	12-15V	13.5-18V	20-26.4V	24-30V	41-56V
INPUT VOLTAGE RANGE	88~264VAC 47~63Hz; 124~370VDC					
AC CURRENT	7A/115V 3.5A/230V					
POWER FACTOR	0.95/100~240VAC					
INRUSH CURRENT	18A/115V 36A/230V					
LEAKAGE CURRENT	<3.5mA/240VAC					
OVERLOAD PROTECTION	105%~135% TYPE:FOLDBACK CURRENT LIMITING RESET:AUTO RECOVERY					
OVER VOLTAGE PROTECTION	13.8~16.2V	15.5~18.2V	18~21V	27.6~32.4V	31~36.5V	57.6~67.2V
FAN CONTROL, O.T.P.	RTH1 or RTH2>=50◦C FAN ON, <=45◦C FAN OFF, >=70◦C OUTPUT SHUTDOWN					
TEMP. COEFFICIENT	±0.03% / ◦C (0~50◦C)					
SETUP, RISE, HOLD UP TIME	1.5s, 50ms, 20ms					
VIBRATION	10~500Hz, 2G 10min./1cycle, PERIOD FOR 60min. EACH AXES					
WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC					
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:500VDC / 100M Ohms					
WORKING TEMP., HUMIDITY	-10◦C~+50◦C(REFER TO OUTPUT DERATING CURVE), 20%~90% RH					
STORAGE TEMP., HUMIDITY	-20◦C~+85◦C, 10%~95% RH					
DIMENSION	185*20*93mm CASE:910					
WEIGHT	1.8Kgs					
SAFETY STANDARDS	UL1950, TUV EN60950 APPROVED					
EMC STANDARDS	CISPR22 (EN55022), IEC1000-4-2,3,4,5,6,8,11 IEC1000-3-2 VERIFICATION					

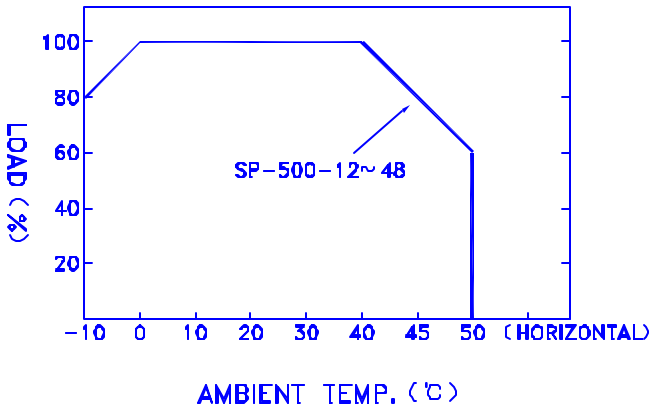
NOTE :
1. ALL PARAMETERS ARE SPECIFIED AT 230VAC INPUT, RATED LOAD, 25◦C 70% RH. AMBIENT.
2. TOLERANCE GINCLUDE SET UP TOLERANCE, LINE REGULATION, LOAD REGULATION.
3. RIPPLE & NOISE ARE MEASURED AT 20MHz BY USING A 12" TWISTED PAIR TERMINATED WITH A 0.1uF & 47uF CAPACITOR.
4. LINE REGULATION IS MEASURED FROM LOW LINE TO HIGH LINE AT RATED LOAD.
5. LOAD REGULATION IS MEASURED FROM 0% TO 100% RATED LOAD.
6. C3,4,14,16,31,32,101,102 MUST BE REMOVED.
7. REFER TO OUTPUT DERATING CURVE VS INPUT VOLTAGE.

JUN.09.98

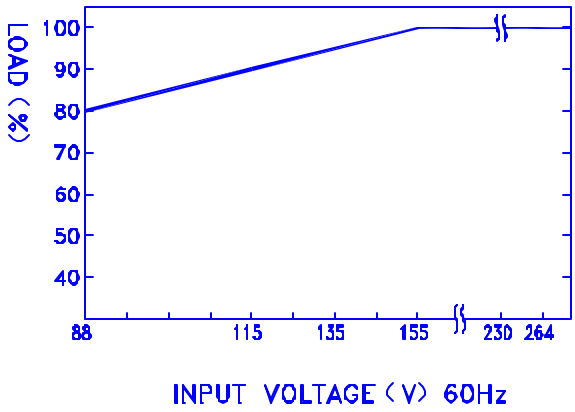
BLOCK DIAGRAM



OUTPUT DERATING VS Ta



OUTPUT DERATING VS INPUT VOLTAGE



DIMENSION (mm)

- CASE : 910
- TERMINAL PIN NO. ASSIGNMENT
  - PIN 1,2 : AC INPUT
  - PIN 3 : FG ⏚
  - PIN 4,5 : NC
  - PIN 6 : R.C G
  - PIN 7 : R.C.
  - PIN 8 : +S
  - PIN 9,10,11: DC OUTPUT +V
  - PIN 12,13,14: DC OUTPUT -V
  - PIN 15 : -S